USACE PLANNING PROCESS

Water Resources Development incl. Climate Change Prepared by Derek J. Chow, Chief, Civil & Public Works Branch For the Guam Assembly of Planners November 30, 2016

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."





WHY PLAN?

 OAHU FREEWAY. Interstate H-1 was authorized as a result of the Statehood Act of 1960.[4] The portion of H-1 that runs through downtown Honolulu opened in 1953 as the Mauka Arterial; it was added to the Interstate system when Hawaii became a state. This section has been largely unchanged since its inception and its design suffers from having too many on/off ramps, short distanced on-ramps, and on-ramps that enter the freeway almost immediately before an off-ramp (opposite of current design standards). The 'new' section of H-1 was, however, built to modern

freeway standards.

 "CHANCE FAVORS THE PREPARED MIND" – villain from the movie Under Siege.



AGENDA

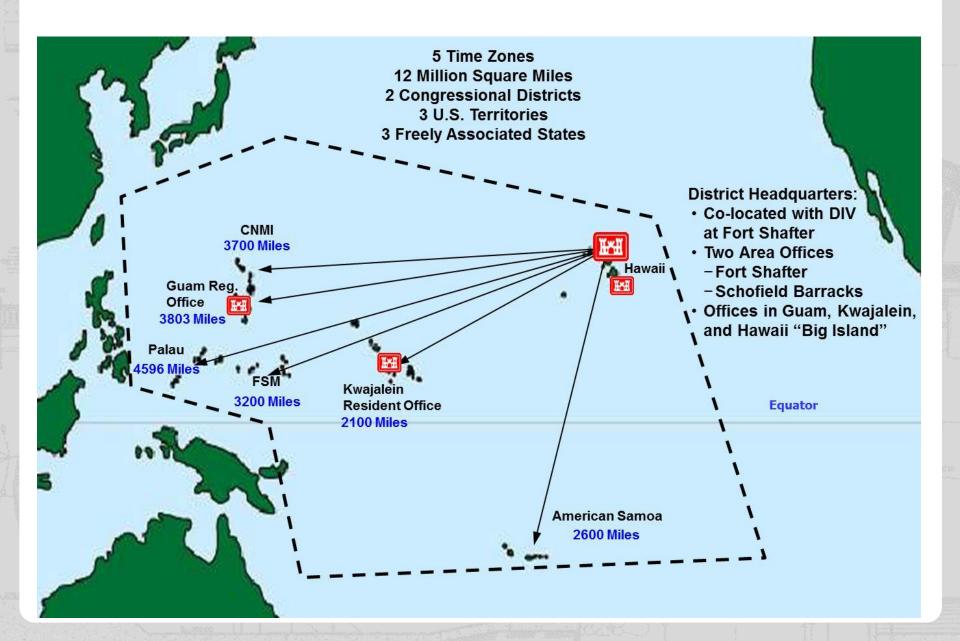
- Area of Responsibility
- Mission Sets
- Services
- Project Purposes
- Project Development Process
- Planning Principles
- Plan Formulation
- Criteria
- Principles of Analysis
- Future Without Project Condition
- Summary of USACE Planning
- How can we help create the village of Tomorrow?

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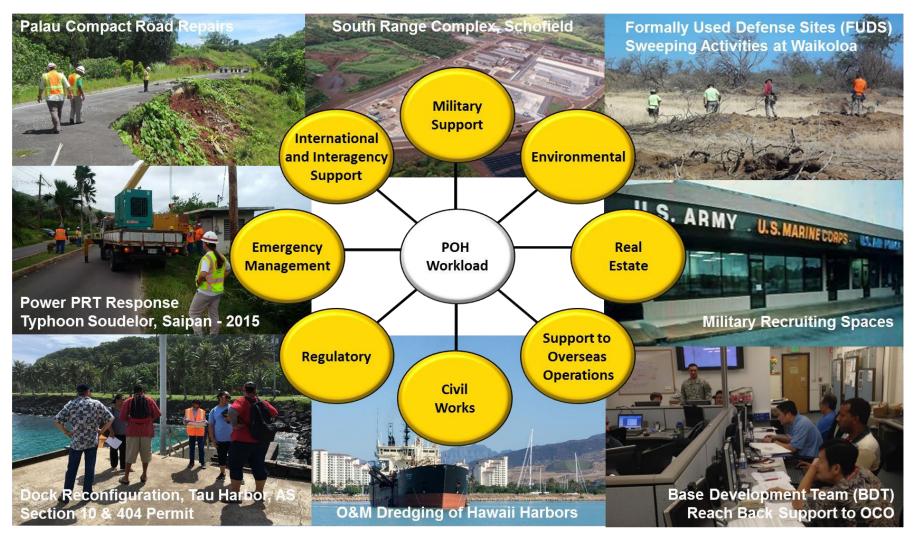




AREA OF RESPONSIBILITY



MISSION SETS







SERVICES

PROJECT DEVELOPMENT

- Develop large and small water resources development project in the areas of Navigation, Hurricane & Storm Damage Reduction, and Ecosystem Restoration.
- Generally, cost shared 65% Federal; 35% local government.
- Long term solution.
- Watershed Planning.

TECHNICAL STUDIES

- Flood mapping studies 100% Federally funded.
- Technical studies and master plans 50% Federal funded; 50% local government funded.

WORK FOR OTHERS

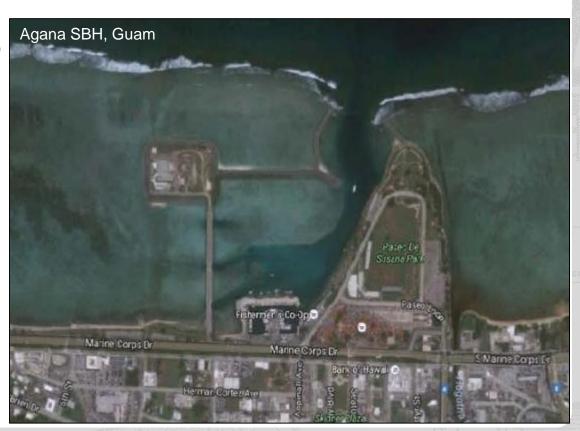
 Utilize USACE like a private consultant through executing support agreements for definable features of work.



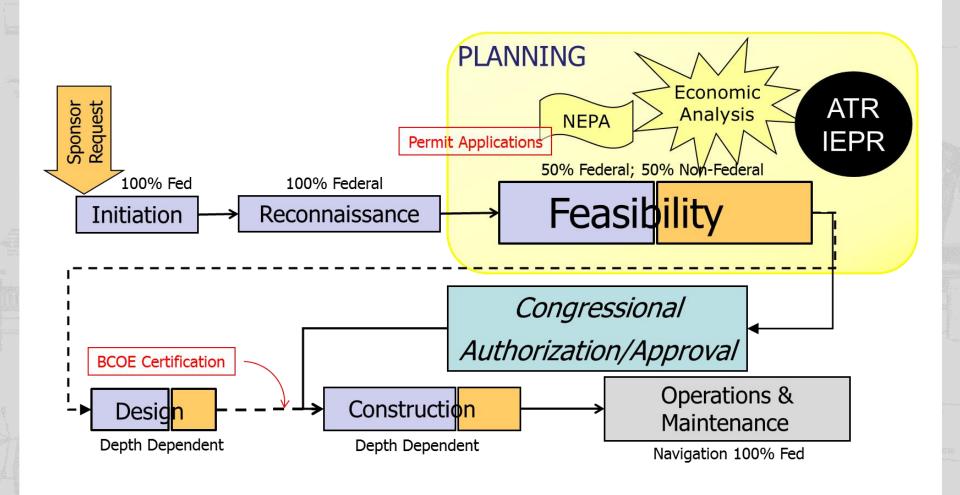


PROJECT PURPOSES

- Navigation
- Hurricane and Storm Damage Protection (flood control and shoreline protection)
- Ecosystem Restoration
- Hydroelectric Power (secondary)
- Recreation (secondary)
- Water Supply (secondary)



PROJECT DEVELOPMENT PROCESS



ER 1105-2-100, Planning Guidance Notebook





PLANNING COMMUNITY TOOLBOX - TRAINING

- PCC1: Civil Works Orientation
- PCC2: Planning Principles and Procedures
- PCC3: Environmental Considerations
- PCC4: Economic Analysis for Water Resource Planning
- PCC5: Hydrology and Hydraulic (H&H) Considerations in Planning
- PCC6: Plan Formulation
- PCC7: Public Involvement and Team Planning
- Risk Analysis

https://planning.erdc.dren.mil/toolbox/resources.cfm?ld=0& Option=Main





PLANNING PRINCIPLES

- FEDERAL OBJECTIVE
 - Based on Principles and Guidelines.
 - National Economic Development
 - Environmental Protection

Utilized by USACE, NRCS, Bureau of Reclamation,

TVA

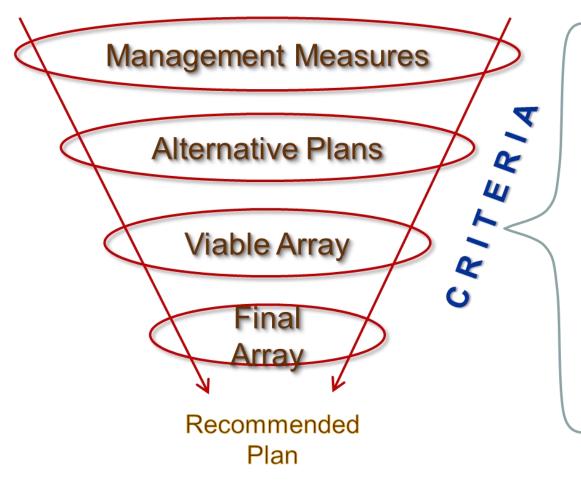
Tinian Harbor breakwater, CNMI







PLAN FORMULATION



- Technical feasibility
- Implementation cost
- O&M requirements
- Cost-effectiveness
- · Availability of land
- Acceptability
- Social fairness
- Flood risk reduction
- Life safety risk reduction
- Community resilience
- Environmental impact
- Cultural resources





CRITERIA

- Completeness, Effectiveness, Efficiency, Acceptability
- Sponsor Objectives
- National Economic Development
- Environmental Quality
- Regional Economic Development

Other Social Effects









PRINCIPLES OF ANALYSIS

- Period of Analysis (generally 50 years)
- Without-Project Condition
- With-Project Condition
- Benefit-Cost Analysis (aka BC ratio)
- Cost Effectiveness Analysis
- Net Benefits (Optimization)
- Incremental Analysis
- Trade-Off Analysis
- Risk and Uncertainty Analysis
- Planning Area (systems approach)
- Prices/Costs







FUTURE WITHOUT PROJECT CONDITION

- Most Likely Condition Expected to Exist in the Future
- 50 year Economic Life
- Climate Change
- Land Use Changes
- Environmental Changes
- Economic Changes
- Urban Development

 Basis that all proposed plans are compared to









USACE PLANNING

- Management Measures

 Alternative Plans

 Viable Array

 Final
 Array

 Recommended

 Technical feasibility
 Implementation cost
 Cost-effectiveness
 Cost-effectiveness
 Cost-effectiveness
 Cost-affectiveness
 Flood risk reduction
 Community resilience
 Environmental impact
 Coultural resources
- Inform a decision to recommend that Congress invest in the development of the project.
- Primarily based on National Economic Development Benefits.
- Prescriptive.

Serving Our Military, Our Nation, and the People of the Pacific







HOW CAN WE HELP CREATE THE VILLAGE OF TOMORROW?

- Adopt an Integrated Comprehensive Planning Approach; i.e., clear and achievable objectives, coordinate/integrate all actions.
- Leverage Other Resources; e.g., Federal funding, philanthropic funding, reach beyond your local knowledge.
- Engage All Stakeholders, especially the Community.







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